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MAN AND HIS ENVIRONMENT IN GERMANY

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II.

WHILE internal commerce in Germany is favored by natural advantages, foreign commerce has not been so favored. With the exception of the Danube all the large rivers have fairly straight courses northward to the sea, entering it on a shallow coast with off-lying sand bars and shoals. Most of the river mouths are shallow estuaries, and it has required extensive dredging to render them adapted to modern commerce. Germany, having much need of foreign raw products for its manufactures, having many goods for sale, and having navigable streams leading to the sea coast, has naturally maintained the harbors as the increase in size of vessels demanded, though at great expense. She has developed one of the greatest merchant marines, and one of the great navies of the world. Naturally the greatest commerce has developed at the mouths of the principal river highways, at Rotterdam in Holland on the Rhine delta, and at Hamburg on the Elbe. The North Sea ports are far less important, for they are farther from the ocean highway, the winter climate is colder, and there is a less productive hinterland. The first of these disadvantages has been diminished by the cutting of the Kiel Canal across the Danish peninsula, but since the others remain it is not to be expected that Kiel, Stettin, Danzig or Kœnigsberg will rival Hamburg, Bremen, and Rotterdam which are nearer the ocean, have a remarkably productive hinterland, and are connected with it by navigable waterways and by railways.

MANUFACTURING

Abundant and varied raw products, facilities for internal commerce, and opportunities for exchange with the rest of the world, give invitation for extensive manufacturing which an energetic and intelligent people like the Germans would naturally seize. They made their beginning in manufacturing many centuries ago, as the results of their remarkable handiwork in wood, metal and textiles, to be seen in the museums,

abundantly testify. Doubtless they made their beginnings in manufacturing to supply their own wants, and we have ample proof that they applied to their manufacturing a noteworthy inventive genius, even far back in the Middle Ages; but further development has long been encouraged by the geographical position. The central location of Germany among European countries, has had the double effect of bringing to the people the knowledge of development in other lands, and of furnishing a source of needed raw materials and offering a market for finished products. The trade in the days of Venetian supremacy and of the Hanseatic League testify both to the importance of Germany as a highway and to the influence exerted from the outside upon her manufacturing.

With the lessons acquired from among themselves and from outside, the German nation has developed in manufacturing in a marvellous manner. The wonderful development of German manufacturing is based upon a series of factors of which the following are most important:—a gifted, energetic people, with a scientific habit of mind, an abundance and variety of raw products, excellent and fairly well distributed fields of coal for fuel, abundant means, both natural and artificial, for distribution of products raw and manufactured, and a central position whose past influence gave early progress to manufacturing, and whose present influence is important in supplying either a source of raw products or a market for manufactured goods, or both.

The German's Scientific Habit of Mind

Among these factors is one of such fundamental importance that I wish to dwell upon it, namely the scientific habit of mind of the German. This may not be a geographical topic, and it would be difficult to prove it to be the result of geographical influence; yet I have confidence that if we could trace its development we would find it to be so. Invited to industry, and in fact forced to it, by a not too favorable environment; long practiced in handicraft because of the invitation from the readiness of exchange with the outside world along the highways; taught lessons from outside by reason of the ease of communication with neighbors, and forced to study and invent to meet demands, it seems natural that these people should develop a scientific habit of mind. They surely possessed it in the Middle Ages, as the wonderful collection of metal, wood and textile work of that period proves. Whether having its origin in the influence of geographic environment, or in some natural gift of still vaguer origin, the scientific habit of mind of the German has come down to the present time and has found expression in a series of wonderful inventions whose success has profoundly influenced Germany's manufactures and her progress. It finds expression in patient investigation, persistence in the face of repeated failure, and willingness to adopt the successful result when its success is demonstrated. The importance of fos-

tering the scientific habit of mind has long been recognized by the government as no other nation of the world has done. The scientific and technical schools of Germany are without rival.

It would be a great task to enumerate the highly important contributions to technology made by the Germans from which the world at large is profiting, and I shall attempt to name but few. The development of the sugar beet and the resulting beet sugar industry has placed a country which was formerly dependent upon other nations for its entire sugar supply not only in an independent position, but has made it a great exporter of sugar. The work of scientific chemistry has given rise to the important manufacture of anniline dyes and other tar products. Metallurgical processes the world over are fundamentally dependent upon the scientific methods invented in the mining centers of Germany. Development in electricity, in chemical works, in engineering, and in manufacturing of a wide variety of kinds, has felt the profound influence of the German scientific spirit. In pure science their results are equally noteworthy. As a natural outcome of the development of this spirit have come high ideals in education, and here, too, it is possible for us to take lessons.

The Complexity of the German People

There is now welded into the German nation a complex of peoples, as would be expected from the central position of the country and its varied history of migrations, invasions and changing political boundaries and alliances. The result is that one finds much difference in the people from place to place. I would not undertake the task of describing and interpreting these differences, but merely note the fact that the Prussian is a quite different being from the Bavarian, or from the German of the Rhine valley, or the Silesian, or the inhabitant of Schleswig-Holstein, or of the Eifel region. These differences are doubtless traceable to the influence of environment, including in this the effect of isolation on the one hand and of easy communication and migration on the other.

Geographic Influence

In many details Germany gives illustration of geographic influences. One of these that has interested me somewhat is the character of the country houses. The architectural style varies greatly, but to this I am not able to ascribe geographical causes. In the material of which they are made, however, there is clear response to the influence of environment. On the northern plain are many brick houses and concrete and cement houses; in the Black Forest and the Alps, where wood is abundant and near at hand, are wooden houses; in the Eifel are houses of lava rock, and even of volcanic ash; and in fact the stone houses vary within narrow limits according to the available building stone. The roofs are prevailingly of tiles, varying in color according to the clay of which they are

made; but slate roofs prevail in the neighborhood of the slate quarries, as in the Thuringen Forest and here even the sides of many of the houses are sheathed with slate.

One noteworthy feature illustrated by the houses, as in other directions, is the evidence of permanence which contrasts strikingly with conditions in many parts of the United States, where the temporary nature of existing conditions is strikingly manifest. As would be expected in a country of such age and history as this, where quarrying occupations have been carried on for long enough time to materially alter local topography, and where, as at Mendig, building stone and grindstone quarrying has been carried on continually since the days of the Romans, it has proved profitable to build not merely for the present but for future generations. The houses, like the castles, have been built to withstand the ravages of time. The prevalence of this habit of building for the future is noticeable also in the public works and in planning for the growth of cities, in which a broad and wise outlook upon the future is everywhere exercised. With it comes necessary supervision in which both human safety and architectural harmony are cared for. The result is that the large German cities are growing symmetrically, there are few of the older sections and no new ones, in which there is offensively bad taste in architecture; the homes of the working classes are cleanly and sanitary, and there is little need of a fire department.

A large proportion of the people dwell in villages and small towns, though they no longer need to do so for purpose of protection. Originally these were the homes of the peasant farmers who owed allegiance to an overlord whose castle was perhaps in or near the village. These conditions still exist, and in travelling through Germany one is constantly coming upon small villages in the valleys, on the plateau upland and on the northern plain; and castles and castle ruins abound. Although the people are no longer under the feudal system, much of the land still belongs to the nobility and is worked for them by the peasants. Many of the villages and small towns are picturesquely located, perhaps on the crest of a river gorge, because of the location of a castle in an inaccessible and easily defended position; but far more are out in the rolling plateau or plain in the midst of the farm lands. To some of these villages and towns, notably in the north, manufactories have come, replacing the ancient home manufacturing, and giving rise to growth which in some cases has developed villages into cities.

German Cities

The larger cities of Germany group themselves into four classes, three of which are geographical and the fourth political. There are the seaports, the navigable river cities, the purely industrial cities mainly located in and near the coal fields of the northern edge of the plateau,

and the capitals. Naturally all the larger cities are likewise industrial, even though far from coal. Most of the cities owe their location and growth to favorable geographic position, though in the case of some of the capitals as for instance Munich and Berlin, there are no dominant natural local features which determine that larger cities should grow at those particular points. The mere fact of being a court center with all that naturally follows upon this—the army, the court, political officers and representatives, the university, the museum, etc.—is sufficient to determine the importance of a capital; and with the building of canals and railroads it has been natural, in a nation that is making rapid progress, for industry to center here and for modern growth to follow. That this statement is true is well proved by the fact that in the days of Middle-age trade Augsburg, not Munich, was the important center for this region, and Nuremberg was a more important city than Munich. These three cities lie essentially on the highway from Venice to the Rhine, but Augsburg and Nuremberg grew to power under its influence; both have also made modern progress, especially Nuremberg, but Munich has far outstripped them. Had either of these cities chanced to be the present day capital of Bavaria it, not Munich, would probably have been the largest city of southern Germany.

Frankfurt lies on this same highway from Italy to the Rhine, and also on the route from the northern German plain to the densely settled upper Rhine valley. Cologne, on the navigable Rhine essentially where the east west route along the northern plateau edge must cross it, is also at a junction of important highways, and Dresden has a similar position on the Elbe. Cologne is essentially at the lower end of the Rhine gorge, and Dresden of the Elbe gorge across the end of the Erz Gebirge. Cologne has been profoundly influenced by the neighboring coal fields and by the great industrial development which has given rise to the rapid growth of Aachen, Dusseldorf, Elberfeld, Barmen and other manufacturing centers near by. This has come to be one of the leading industrial centers of the world; and Cologne, the largest city of the region, lies on the navigable Rhine near its midst. The location and growth of cities is one of the simplest and most easily understood illustrations of geographic influence, and it would be possible to greatly lengthen the list were it worth the while to do so.

In the location of castles, towns, and capitals, the prime question has often been that of ease of defense. The German people have had a long and stormy history. Its hundreds of ruined castles testify eloquently to this, and its walled towns, found here and there, are vivid evidence of the past conflict. Sometimes, as at Rothenburg, the wall is intact and the town is still about as it was in the Middle Ages; elsewhere, as at Nuremberg, a new modern city has spread out beyond the walls which still remain in part, enclosing an old quarter of quaint architecture, contrast-

ing strikingly with the outer ring of modern city blocks. In still other cities, as in Munich, only remnants of the wall remain, and in Berlin, only some of the old houses, and the names of the old gates which no longer exist.

Geographical Influences in the Expansion of Germany

The long battle of the German people has been partly with their neighbors, partly between rival parts of what is now the German Empire, one or both sides often aided by outsiders in their struggle for mastery. This struggle, which has perhaps been the most bitter and long continued among European peoples, has had its origin in two very important geographical conditions, first, the openness to attack from all sides, for even the Alps have not served as an effective barrier, and secondly, the varied topography of the German Empire and its immediate vicinity which has given invitation to the development of individual states as one nobleman or another gained the necessary power to extend his dominion. The result was that there came to be numerous kingdoms, dutchies, free cities, etc., held together by a loose form of confederation sometimes used for purposes of defense, but often split by internal jealousies of the component parts with resulting war and various alliances with outside nations. Only after the Franco-Prussian war has there come to be sufficient cementation of component parts to guarantee long continued peace and opportunity from industrial advance, and the result has been truly marvelous. Of these component parts the Kingdom of Prussia is naturally the largest, as it was the most powerful; for, having an uninterrupted plain for its seat of empire, it naturally and relatively easily spread its boundaries. Bavaria fairly well bounded on the whole, is next in size and spread its area through a considerable portion of a natural geographic province. The greatest complexity of political conditions existed in the region of most varied topography, between the Rhine gorge and the Prussian plain. Inaccessibility, by reason of the protection afforded by mountain, forest, and river gorge, in part explains the complexity here, and in part it is due to the relative undesirability of much of this section as part of a kingdom to be occupied and protected.

It is undoubtedly true that the long continued fighting of the German people has had much to do with the development of the elements of the German character, both desirable and undesirable, and in so far as this is true it is an outcome of the influence of environment. Fighting trains a certain form of intelligence; it develops hardiness and instils a spirit of persistence and bravery which can be applied to the works of peace when not required in war. Much of Germany's modern progress may be due to the long preparation of her people in the school of war; and so long as quarrels were the rule, and the intervals of peace were employed mainly in recuperating for renewed fighting, little substantial progress was possible. Thus England, protected by sea, gained a notable lead in

industrial development. In her forty years of peace Germany has made such strides to the front as would have been possible only in a people well prepared, greatly gifted, making the most intelligent use of the environment by which they are surrounded.

Germany's Need of Defense

Although internal discord has been allayed and the influence of diverse topography thus overcome, Germany is still menaced by her central position between rival nations from whom she is for the most part separated by no effective natural boundary. She is obliged to support a great army. Her industrial progress has brought her another danger, for she must sell her surplus products in the markets of the world and is thus brought into rivalry with England on the sea. To the burden of the army is added that of a great and growing navy. Besides the money involved, which is an enormous amount, a great body of young men are for a period of several years withdrawn from productive industry even in times of peace. It is not an unmixed evil, however, for an education of value is gained by the youth while serving. They receive a certain training in honorable carriage, in obedience, in contact with fellow men, in seeing something of the world besides their own village and in other ways. It is a mooted question whether the advantages fully counterbalance the vast waste of money and productive labor, but under existing conditions it seems a necessary consequence of Germany's geographical situation. No one can foretell when the need for these men in war will come and in the meantime it is necessary to be prepared, and perhaps ample preparation will avert the day of need.

Conclusion

In this article I have tried to outline Germany's condition as I see it, to interpret the operation of geographical influences immediate and remote, theoretical and actual, and above all to show how fully and intelligently the geographic environment has been taken advantage of in the interest of national growth. An American believing in his own country and anxious to see it develop to the fullest extent, and with the wisest utilization of its almost boundless resources, while he sees an abundance of conditions in Germany in which we are immeasurably in the lead, cannot if he is observant fail to see other conditions from which we may well take lessons. Among the most important of these is the careful husbanding of resources, conservation we may say, a lesson which our people, in the prodigality of our resources, have only begun to learn the need of, but which we owe to ourselves, our descendants and our country to learn well and quickly. Another is the cultivation of the scientific habit of mind by education and the encouragement of research. Geographical influence alone will give a people only a temporary opportunity,

and wasteful exploitation, while it enriches a few and makes rapid progress for a time, will in the end bring its own punishment, but unfortunately to generations which have no share in the blame. Already we are beginning to feel the baneful results of the prodigal waste of our former vast forest resources, and unless our habits are changed, we shall ere long begin to feel the effects of wasted soil and wasted mineral resources. Some of our resources, like many of the navigable water ways, we are utilizing scarcely at all. To render the geographical influences of our land of abundant resources of the most value to the country, from the standpoint of its whole life, we must learn to utilize them to their full extent, and at the same time to so husband them that they shall continue to contribute to national growth and importance. Along these lines we can look to Germany for some of the best lessons that the world furnishes, as we can look to other countries for a warning as to the consequences of the failure to utilize the resources in a way that will protect future generations.

THE WORLD'S GREAT RIVERS.

The Amazon

By Isaiah Bowman

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"GOD KNOWS how we got through that great mass of water. I advise thee, O great king, never to send Spanish fleets into that cursed river." Such was the advice of one of the admirals of Spain to Philip the Second over 350 years ago. In all the intervening time man has left the greater part of this river alone, except at those places where rubber is found.

The main stream of the Amazon is about 4,000 miles or 600 miles longer than the distance from Liverpool to New York. It has 29 large tributaries, each a great river in itself. It offers a means of inland navigation, for more than 20,000 miles. The source of the river is only 60 miles from Lima, near the Pacific coast. It thus is seen practically to cross the continent of South America from west to east, and that at a place where the continent is almost at its widest. It leads through a vast region, supplying rubber, chocolate, hides and tropical woods, which would be of little use to man were it not for this great pathway, for the tropical forest is all but impenetrable away from the river courses that offer natural highways.

Not only is the Amazon the largest river in the world, but its course is also the flattest. It is extremely hard to realize that the first 500 miles has a descent of less than one-eighth of an inch a mile. We are accus-

tomed to thinking of the Mississippi as having a very flat course from Cairo to the Gulf, with a grade of three or four inches to the mile, but this is from 24 to 32 times as steep as the lower course of the Amazon. The Nile in Egypt has extremely flat stretches, but nowhere does the Nile have a gradient less than twice that of the lower Amazon. Nor is the lower part of the river exceptional in this respect. Two thousand miles from its mouth the Amazon is only 35 feet above sea level. The headwaters of its largest tributaries, the Madeira, the Maranon, and the Negro, flow on such low gradients, almost at the base of the Andes, that one may see on the one hand lofty mountains whose summits are shrouded in clouds and on the other hand a vast flat plain only 700 to 1,000 feet above the sea, and yet more than 3,000 miles distant from it.

Strange as it may seem, the Amazon and its tributaries, for all their flatness, have rocky stretches in their courses. Five hundred miles up the Amazon are the rocks of Obispo; the islands at the mouth of the Amazon are in part rocky; and the Madeira has a line of thirteen falls and rapids in a stretch nearly 200 miles long. The above figures of river gradient show what the average descent is, but long stretches of the river are quite flat. These are in fact great lakes connected with each other by shorter stretches of relatively steep descents. So intricate and complex are the channels that it is often exceedingly difficult to make out the main ship channel which the boat is to follow; and a canoe once in a back channel often has a hard time again finding the main stream. One may travel up these back channels for hundreds of miles, so numerous are they, and never once come in sight of the principal stream. These side channels through the forests are called "canoe paths" by the Indians and are to be found almost everywhere. They often run for long distances parallel to the river and intersect the tributaries so that one may go from Santarem, 1,000 miles up the Amazon, without once entering the main stream. Often the tangle of water and land but little resembles a great river like the Mississippi with its regular curves and great main current. When the rains are heaviest the water rises and spreads far and wide over the country and turns large portions into vast lakes. Altogether, the river is most irregular in its behavior and very uncertain. The land is so flat that the slightest change in cutting or filling throws portions of the river quite out of the old courses and wholly changes their appearance.

The great heat and rainfall of the Amazon valley unite to produce one of the few really tropical forests of the world. The density and luxuriance of the Brazilian forests pass belief. In many places the plants crowd into every space and make an incredibly dense mass of vegetation so that only by hewing a way through is it possible to travel away from the streams. A landing on the banks of the river is in many places impossible on account of the wall of vegetation that lines the bank and even

leans far out over the stream. This is the most extensive and most unbroken single forest on the earth. One may travel for weeks and even months and find scarcely an acre of ground not occupied by trees. So thickly do the trees stand and so completely does their foliage shut out the sun that the interior of a tropical forest is gloomy and solemn and sombre indeed. Every plant seems to be crowding its neighbor for light and air and room in which to grow. So gloomy is the interior of a tropical forest that it is with a sense of relief that one comes out to the river vista at the end of a trail and again sees the sun and sky. It is on the side of a trail or on the bank of a stream that one sees the real beauty of this forest. Here one may find masses of bushes and shrubs and trees of every type rising one over the other, all exposed to the bright light and the air and decorated to the topmost branches with fruit and flowers. The brilliant coloring of the flowers stands out sharply against the background of solid green and gives a charm that is all but lacking in the dark interior.

It is a mistake to suppose that the tropical forest offers charms that are lovelier than those that may be found in the forests of the temperate zone. The spaces between the trees are so crowded with vines and underbrush and shrubs that there are no beautiful woodland aisles as in our forests. The sunlight is so completely shut out that one misses the dappled effect upon the carpet of leaves and grass that beautifies our stately forests of pine and redwood and beech. There may be beautiful flowers in the tropical forests, but for every flaming blossom found there, one as beautiful may be found in our forests and pastures. Luxuriant, but over-crowded; dense, but impenetrable; decorated with blossoms along the the river banks, but gloomy in the depths of the forests; these are the qualities that make one love the home forest the more for having seen that of the tropics.

When the great explorer, Humboldt, visited the Amazon Valley early in the 19th century, the region was almost unknown to the civilized world and its resources were almost untouched. Humboldt dreamed of the day when there would be a dense population, teeming cities, and great and varied industries. But his dream has never been realized and will not be until man conquers more thoroughly tropical diseases, the weakening effects of the combination of great heat and high humidity and the torment of insects that weaken men's energies and give disease an easy chance. The useless brush and the vines must be burned or cut away to some extent and useful plants put in their stead. The superabundant life of the forest must be controlled and man must fight to maintain useful plants that serve his needs.

THE NEW YORK STATE SYLLABUS

Unusual interest always attaches to the revision of the New York state syllabus, which covers both elementary and secondary school studies. Each five years the syllabus is revised. The revision is done by a body of practical teachers and state officials, not by doctrinaires. Suggestions are gathered from all available sources. This periodical inventory of past results and revision of courses by practical school men, enables the Education Department of New York to keep constantly abreast of new movements, and to exert an active influence upon other states. The new syllabus provides for the teaching of Geography from the third to the eighth school years, inclusive:

Third year, *Home Geography.*

Fourth year, *North America, the United States and the remaining continents in outline.*

Fifth year, *New York State and a continental review.*

Sixth year, *Europe and North America and their Colonies.*

Seventh and Eighth years, *Industrial and Commercial Geography.*

We print, this month, the syllabus and recommendations for the THIRD YEAR in school,

HOME GEOGRAPHY

By the beginning of the third year the child has usually learned to read a little, although not usually well enough to be independent. For this reason the work of the third year is chiefly oral. It is devoted to what is ordinarily called "home geography."

The work in home geography should be very simple and should concern itself chiefly with a study of local industries and the conditions which have given rise to these industries and made them prosperous. Explanations should be of a most elementary character and deal only with relations which are perfectly obvious. The chief topics to be considered include:

I. The leading industries of the locality, their location, and importance.

II. The sources of raw material and some stories concerning the collecting and handling of this raw material.

III. A study of the manufacture of this raw material or of similar raw material. In this work local industries only should be studied, and these, whenever possible, should be visited.

IV. Means and methods of transportation and communication.

V. Trade.

Whenever the home is a large city it will be well to consider also:

I. The reasons for the location.

II. The needs of the people and the consequent private industries and public service and public institutions.

The time devoted to the work should not cover more than one half of the third school year and less time will often serve. Through the study of commerce—the sources of raw materials and the markets for manufactured products—as well as through the stories which are told him, the child ought to become familiar with the idea of more or less distant lands where other people live and labor.

The remainder of the year should be devoted to the study of the "world as a whole," as to its larger divisions and in its simple relations. Here both the textbook and the globe are of service. Through them the children learn:

1. That the land upon which they live stretches away for many miles in every direction, and that it is surrounded by water.

2. That the earth itself is "round like a ball or an orange," and that people may travel around it. (Imaginary journeys around the earth may be helpful in teaching this.)

3. That the earth is so large that it takes a long time to travel around it, even when fast trains and steamers are used.

4. That there are a number of large bodies of land and water: the first called "continents," and the second, "oceans."

5. That continents and oceans have special characteristics and names. These characteristics and names should be drilled upon until the children are able to recognize and name each continent and ocean, give their chief characteristics and define their positions in relation to each other.

6. That the earth rotates upon its axis and causes day and night.

7. That it is warmed and lighted by the sun.

8. That some parts of the earth are warmer than others.

9. That it is divided into zones and hemispheres and represented as a whole by the globe, and in its parts by maps.

Great pains should also be taken to teach the children the nature and use of maps, as in all the later study they will need to refer to them constantly. They are to be taught that maps are not pictures. The facts represented are usually shown by a system of arbitrary symbols bearing but little if any resemblance to the features themselves. Simple map work should be begun very early in the third grade and carried on systematically throughout the entire geography course. The first maps will, of course, be very simple. The schoolroom with the teacher's desk, the rows of children's desks, the aisle, windows and doors, is difficult enough at first, and to draw even this, some preparation must be had and infinite patience shown. Next the outline of the school building may be drawn, and later the school yard with nearby streets or roads.

In map study the following points should be emphasized:

1. *The map idea.* The fact that people have agreed to represent land and water by means of "maps."

2. *The fixed position of maps.* This refers to the fact that maps are

generally printed in books and hung on walls so that the northern part of the country is toward the top of the map; the southern part toward the bottom of the map; the eastern part at the right, and the western part at the left. In certain kinds of maps and in maps representing large areas this is not always possible, and therefore no map should be without symbols of some kind to indicate direction and position.

3. *Scale.* Maps are small and the areas mapped are often very large, and in order that they may be properly constructed, they must be drawn in proportion, or to scale. Very simple scales should be employed at first: 1 inch to a foot, 1 inch to a yard, 1 inch to a rod, etc., depending upon the size of the area to be mapped.

4. *Symbolism.* In the construction of maps a large variety of symbols is employed. These refer chiefly to topographic, hydrographic and cultural features. There is but little need of map symbols in the third grade, but, as without a knowledge of their meaning when they are used the map would be of little service, it is worth while to call attention to them early. All new symbols should be explained as soon as used.

During the entire third year, if the work is not provided for in the nature study course, simple weather observations should be made and records kept by the children.

Suggestions to Teachers

Do not attempt too much. Choose a few things which are important, study these with care and drill upon them until they are thoroughly understood. Only a few excursions should be undertaken, but each one should be discussed in class until the meaning of the things and facts observed comes home to the children.

Make your illustrations and explanations simple. Use technical terms only when necessary and always explain them. *Do not attempt too much.*

Much of the work in home geography must in the nature of things be oral. For that reason it is necessary that the teacher be thoroughly acquainted with local geography. Whenever excusions are to be undertaken the teacher should go over the ground first and make a definite plan as to time, route and the things to be seen. No really dangerous trips should be taken or allowed. The number of children should be limited. If the teacher is alone 25 is the maximum for profitable work. In many cases, as in visits to factories, even this number will be found far too large for any one person to handle with safety.

It should be remembered that each excursion will furnish sufficient material for many subsequent class discussions, and that without these class discussions the excursions themselves are of little value.

It will be noticed that but little work of a physiographic character has been outlined. This is because it is believed that most work of that

kind is not only outside the child's experience, but also beyond his comprehension. If it is thought necessary or desirable, it may be introduced; but it should be done sparingly.

Tell the children stories about the plants, industries, people and cities. If these stories are simple enough they may be read by the children. It is believed that after the children have observed these things in their own home locality they will take keen delight in learning about them from books.

The work here outlined correlates closely with the other work of the grade. The study of industries furnishes an abundance of material for the best sort of modern arithmetic, and the stories of industry, people and products, when retold by the children, furnish excellent drill in the use of correct English.

As far as possible the work should develop in a logical order, but no attempt should be made to force the child to do much reasoning. In this early stage of his mental development he is not a reasoning being. He is, rather, storing his mind with facts. He remembers. If it is possible to remember things in relation to each other, so much the better.

Nothing quite takes the place of actual observation and experience. The best that can be done is to show pictures, and the best of these are none too good. Where a school is furnished with a lantern, the slides, of which the Visual Instruction Division of the State Education Department has great quantities fully catalogued and easily available, furnish the best sort of illustrative material. Next to the slide is the hand photograph, and of these also the Department can furnish a large choice.

Illustrations cut from magazines and other sources should be carefully selected. Not every picture is a good illustration. Not all of them are worth saving. They should be clear, clean, large, free from confusing details, and when of large things they should contain within themselves units of measure.

BOOKS FOR THE USE OF CHILDREN

ALLEN. Children of the Palm Lands.
ANDREWS. Seven Little Sisters.
——— Each and All.
CAMPBELL. Story of Little Jan, the Dutch Boy.
——— Story of Little Konrad, the Swiss Boy.
——— Story of Little Mitzu, the Japanese Boy.
CARROLL. Around the World, books 1-4.
CHANCE. Little Folks of Many Lands.
CHASE. Stories of Industry, 2 v.
HAMER. Little Folks of Other Lands.
KIRBY. Aunt Martha's Corner Cupboard.
KROUT. Alice's Visit to the Hawaiian Islands.
LANE. The Wide World.

——— Industries of To-day.
MILLER. Little People of Asia.
PAYNE. Geographical Nature Studies.
PEARY, J. D. Children of the Arctic.
——— Snow Baby.
PEARY, R. E. Snowland Folk.
SCHWARTZ. Five Little Strangers.
SCHWATKA. Children of the Cold.
SHAW. Big People and Little People of Other Lands.
LITTLE LUCY'S WONDERFUL GLOBE.

The syllabus of work for subsequent years will be published in later numbers of the *Journal of Geography*.

A PLEA FOR ANGLICISED PLACE-NAMES

By MARK JEFFERSON

State Normal College, Ypsilanti, Mich.

ALL the place-names on the new millionth map of the world are to be written in foreign fashion:—Torino, Firenze, Milano, Livorno, Roma, Venezia and Napoli in Italy where we now write Turin, Florence, Milan, Leghorn, Rome, Venice and Naples. France will show smaller differences in Lyon and Marseille, without final s, and Dunkerque for Dunkirk. Lisboa will look a bit odd for Lisbon and Anvers for Antwerp. So will Kœln, Aachen, Trier and Regensburg in Germany for Cologne, Aix-la-chapelle, Treves and Ratisbon, and Athenai and Korinthos for Athens and Corinth. Though the Roman alphabet is to be used throughout, Russia will have strange names for St. Petersburg and Moscow, to say nothing of less familiar places. Denmark will contribute Kjbenhavn for Copenhagen. Of course these are only strange names to eyes unfamiliar with the languages of the countries in question. The map is for all the world to use in one edition, and the theory is that every one should see his own country's names in the form he prefers, so English and American names will appear as we write them, and foreigners are all to be treated in the same way. Constantinople is expressly excepted and the Turkish *Stamboul* rejected. The French-speaking people of Alsace-Lorraine will feel too that the German names forced upon them are not of their choice; Aachen, for instance, at Aix-la-chapelle. Something of the same sort will probably happen in the Polish parts of Germany and in the German Baltic province of Russia. Not the people of a place, after all, but their political masters will do the spelling. It will be the English who write the names for India, the Russians for Turkestan and the Japanese, probably, for Korea. Most of the world's languages will of course not be represented on the map at all.

If this millionth map came into school-rooms much, it would bring a disadvantage with it in the need of foreign pronunciation. The writer regards such anglicised place-names as Lisbon, Florence and Venice as a valuable feature of English speech. American school teachers do not know foreign languages,—they do not need to, and the help given by pronouncing vocabularies is a poor prop to lean on. Ask a group of teachers or their students to pronounce the names of familiar places like Tierra del Fuego, Callao and Rio de Janeiro, and note, not their bad pronunciation, but their extreme reluctance to pronounce them at all! It is my own experience that the only thing clear in the "school" mind on the subject is that "its" pronunciation is doubtful. Sailors, who have to *use* the names of places in their daily life anglicise many more than does the educated public. Thus *Rio,* with the i as in pie, and *Cally-a-o* for Callao. Personally, while familiar with Spanish names by long residence in South America, so that the native names are more satisfactory to my ear than any imitation of their sounds, I should be glad to see—perhaps I should say hear—a general pronunciation of place-names as if they were English, as far as elementary schools are concerned.

Why do we pronounce Rome, Paris, Berlin and Lisbon as if they were English? Because English speaking people have visited them so much that they have spoken of them often, and we cannot, broadly speaking, *use* words much without putting the imprint of our speech habit on them. But this makes them at home in our mouths. No one hesitates to name such places. The chief result of the general attempt to teach the foreign pronunciation of all place-names according to present vogue seems to be to prevent the common school public from naming them at all. It would certainly better serve all practical ends if we frankly taught all foreign names with an anglicised pronunciation, and where there is a need, with anglicised spelling.

What is the nature of our need of a name for foreign places? To talk about them by. In the geography class we must get our places talked about if we are to have them familiarly known. Those who have studied foreign languages most will be quickest to recognize that it is out of the question to teach all American children or all American teachers to pronounce foreign words as the foreigners speaking many different tongues really do. In fact a very little examination of the pronouncing lists in the books most used shows that they were prepared by people who cannot pronounce these names correctly themselves, if that means as the people really do in the country in question. Names like Mexico, Brazil, Nile, Rhine, Danube and Amazon are satisfactory in their anglicised form as no attempt to imitate the local names could be on the simple ground of being *usable at once.*

That the native pronunciations are never usable at all in our schools

may be seen by anyone who will gather statistics, and the thing that does get used is neither English nor foreign.

I fancy the millionth map will be used only by students, especially the foreign sheets of it, and students must learn foreign languages anyway and overcome such difficulties. The children of the public schools should have no such difficulty imposed on them.

The attempt to express foreign sounds in diacritical marks designed for English must necessarily be successful only in giving an anglicised rendering. The objection I have to this sort of anglicising is that it is done under pretense of rendering the foreign sound correctly and this it cannot hope to do. Our pronouncing lists give but rough imitations of foreign sounds at the best, apart from their frank mistakes.

The matter may be summed up by saying that we are not getting foreign pronunciations, we are not likely to get them and—in the common schools—they would not be of much use if we did.

LESSON OUTLINE

LUMBERING IN THE NORTH WOODS

By LOUISE W. MEARS

State Normal School, Peru, Neb.

I. Lumbering region gradually changed from Maine to Minnesota. 1850, '70, '80.
   1. The Maine lumbermen came from a mountainous region to a a level country. Methods are slightly changed, practically the same.
   2. Lumbering at first on a large scale, rough methods. Only long, straight lengths used. Such timber can hardly be found now. Five inch small ends are now considered worth while.

II. Lumbering Operations. (Four in number.)
   1. Felling.
   2. Skidding.
   3. Hauling.
   4. Driving, or train hauling.

III. Location of camp. (Based on cruiser's report.)
   1. Handy, good water supply (an easy condition in Minn.)
   2. Convenient to parts of logging district. Center if possible. Seldom possible, due to slopes. Swampy country in the north, when frozen.
   3. Road Making.
      a. Train takes place of "tote team."
      b. Tote teamster must be resourceful.

c. Tote road used to be the first thing made.
d. Logging road is iced, little grading. Side roads.
e. Ruts cut. Watering tank sprinkes ruts and makes them icy.

IV. Felling Crew.
1. Two sawyers. One man to notch trees to make them fall in right direction, and to clear trees of branches.
2. Tools: Cross-trip saw, hammer, kerosene for saws to prevent rust.

V. Swampers. Clean out underbrush, before and after the felling.

VI. Skidder. (Usually has two-horse team.)
1. Two methods.
a. In northern woods, skid the logs to large skidway. Winter logging while roads are good. Left on bank. Logs rolled directly from wagon on to skid.
b. In southern woods, hook tongs to single tree, and drag through woods.
c. Sleds used in north. Sleds differ in different localities.
2. Salary of skidder good. Has team.

VII. Hauling from skidway.
1. When snow comes; a permanent freeze; an ideal winter for logging—small amount of snow; much cold; hard, slippery roads.
2. Logs landed on edge of stream, if convenient, otherwise along railroad track.
3. Size of load—average 4000 ft. to 8000 ft.
4. Hauling most careful part of the operation. Anxiety of logger about getting logs out while roads are good. Logs should not be left to rot. Must not cut too much. Haul night and day about the time winter commences to break. Less of this strenuous work done now.
5. New engine invented. Will haul about ten sleds, from 4 to 5 miles an hour. Teams bring logs to engine.
a. One drawback—Pilot exposed in front of engine.
b. A single break-down blockades the way.
c. Advantages—Can haul large loads. Three men instead of ten teamsters. No horsefeed. Not a great feature, however, since lumbering in low countries will not hold out.

VIII. Drive down stream, or loading on cars.
1. Steam-loader taking place of horses and chains.
2. Men—Engineer, firemen, head-loader, markers. (Show how far logs are to go.)
3. River drive cheaper than railroad.

4. In Minnesota, logs hauled from Cass Lake to Mississippi, there put in water.
5. Splash dams to raise water for floating logs.

IX. "Lumber Jacks."

1. Formerly a life job, endurance inexhaustible. Collected in August from everywhere. Hired until Spring.
2. Wages, $22 or $24 per month and board.
   a. Orders for pay could not be cashed until spring. (Sharpers came in sometimes and cashed orders at 33 1-3 per cent.)
   b. New law compelling pay at end of time, at any time. Result, nothing permanent.
   c. Immigrants knowing nothing about logging. "Three crews to run camp—one coming, one going and one at work."
   d. New law has done much damage in woods.
   e. Men mostly young and without families.

X. Wages.

Sawyers—Forty-five dollars and board.
Teamsters—Fifty to Fifty-five dollars and board.
Swampers—Thirty-five to forty dollars and board.
Amount deducted from wages for accident.

(Outline based on notes taken from Prof. Cheney's lecture, Itasca School of Forestry, 1908.)

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MEANING OF THE CONSERVATION MOVEMENT

By Alexander N. Winchell

University of Wisconsin, Madison

Since the days of the Revolution the United States has possessed public lands. For the same length of time the policy of the federal government has been to encourage the settlement of the public lands by settlers, and the use of all their resources by the people. For this purpose any citizen has had the right to obtain absolute title to 160 acres of the public domain free of charge from the government by settling on the land and using it as a homestead. For the same purpose any citizen has had the right to obtain a certain amount of timber and desert land by complying with specified and simple conditions. He has also enjoyed the right to obtain title to public land in smaller tracts if he could discover an ore deposit, and would then do a certain amount of development work on each tract. In these various ways the old "Northwest Territory" and most of the land west of the Mississippi have been rapidly settled and developed; and the ownership of the land has passed rapidly from the federal government to the people.

About ten years ago certain men prominent in public affairs began an attack on the public land policy of the government. The movement was at first directed toward the preservation of forests, but it has developed and expanded until today under the name of the Conservation Movement it aims at the protection of all the resources of the people and the government from waste and destruction. The leaders of the movement are, and of necessity must be, agitators and radicals, but they have done a great public service in calling attention effectively and at an opportune time to the need of a change in the public land policy of the government. The thing of the greatest importance is no longer to induce people to go out on the frontier and till the soil or develop the resources of the country. This country no longer has a "frontier"; the West is now settled to the extent that its population, in proportion to its ability to support a population, is beginning to approach that of the South and the East. Therefore, the time has come when the matter of greatest importance is the most intelligent use of the resources of the country, with due regard to the rights of our descendants in future generations. The public lands should not be turned over to private ownership so freely as to encourage waste. In fact, so far as timber and mineral lands are concerned it is probably desirable that they should not be turned over to private ownership at any time, but should remain a permanent possession of all the people, in order that the exploitation of these resources may be more effectively guarded. By thus retaining the remnant of timber and mineral lands in the possession of the government, and by regu-

lations to prevent waste in exploitation or use of the natural resources of land in private ownership, an adequate supply of such resources may be available for our descendants for countless generations.

Such a change in the policy of the government should be brought about as soon as possible; but it can not be accomplished in a day. It will require also the devising of ways and means to prevent waste in the production and use of natural resources in private ownership. In fact this may be regarded as probably the most important as well as the most difficult part of an effective and satisfactory conservation program.

Such a change in the policy of the government should be brought about without attacking rights already acquired under existing laws. Every lover of law and justice and the "square deal" will endorse this statement, and yet radicals in the conservation movement seem to be inclined at times to forget it. A change in the laws, however desirable, should work no harm to those who have played the part of good citizens under previous laws.

A VALUABLE REPORT ON TRANSPORTATION

The United States Department of Commerce and Labor has issued (July 1909) an important and comprehensive report in two parts on *Transportation by Water in the United States.* The two parts total nearly 1000 pages and have most excellent indexes. A wealth of detailed information is given. From it, the following facts of interest to geography teachers are gathered:

Freight moved in American vessels, nearly all domestic traffic, doubled between 1889 and 1907. Nearly all of our foreign trade is carried in foreign vessels, but such vessels are not allowed by law to engage in our domestic commerce.

In 1855 the traffic on the New York canals was more than twice that of the railroads crossing the state. New York canals now carry less than 3 per cent. of the traffic across the state.

The three leading Gulf ports in order are New Orleans, Galveston and Mobile.

The traffic on the Great lakes has more than doubled in ten years. Four items, iron ore, coal, grain, and lumber make up most of the traffic. There is a vast preponderance of east-bound over west-bound traffic due to the enormous shipments of iron ore from Lake Superior ports to Lake Erie ports. Practically half of the lake traffic is iron ore. The west-bound traffic is largely coal. The east-bound traffic in grain and lumber is declining. Lake Superior has the largest volume of shipments and Lake Erie of receipts. Duluth-Superior has the largest shipments and Buffalo the largest receipts.

The commerce of the Mississippi system, aside from the coal which

comes from the upper tributaries of the Ohio is unimportant and declining. The Ohio with its tributaries has the most important river traffic in the country. Pittsburg has the largest river commerce of any inland city in the country. The traffic on the entire Mississippi system is now not one-third that on the Great Lakes.

One serious obstacle to the commerce of the Pacific coast is the scarcity of coal. This is being partially met by the use of fuel oil which California supplies in abundance.

The commerce between Pacific ports and the Philippine Islands mostly goes by way of Hongkong as there is no direct line from the Pacific coast to Manila. The larger part of the trade with the Philippines is from New York and a notable part of the return movement comes to Boston. The four leading Pacific ports in order are San Francisco, Seattle, Portland and Tacoma.

The report would be useful to teachers in colleges and normal schools, but is rather too long and detailed to be used in the average high school.

SOME "WHY'S" IN EUROPEAN GEOGRAPHY

1. Why is Europe, strictly speaking, not a continent?
2. Why has it so many peninsular projections?
3. Why does it naturally divide into many separate nations?
4. Why has Russia found it possible to expand more than other European countries?
5. Why has the United Kingdom become islands while Scandinavia remains a peninsula?
6. Why are the river-mouths of the British Isles estuaries?
7. Why has England found it difficult to assimilate the Welsh?
8. Why has the separation of the British Isles from the continent proved beneficial to the former?
9. Why is France ideally situated for foreign commerce? Has France fully improved her opportunities?
10. Why, in your judgment, has Germany outstripped France commercially?
11. Why is Germany ideally situated for international trade in Europe?
12. Why is the climate of southern Germany about as cool as that of northern Germany?
13. Why is the climate of all northwestern Europe unusually mild for the latitude?
14. Why should Belgium be a manufacturing nation and Holland an agricultural nation?
15. Why are there so many canals and windmills in Holland?
16. Why is dairying so general in Holland?

17. Why does the physiography of Switzerland favor democracy?
18. Why are the Alps a less formidable barrier than the Pyrenees?
19. Why is Spain arid? Why a great mineral producer?
20. Why is Spain's coast line so different from Norway's?
21. Why does the greater part of the people of Spain live in the outer rim of Spain?
22. Why is the Po valley very fertile? Why is the climate of Italy so mild?
23. Why is Italy such peculiar shape? Greece?
24. Why are so many Norwegians fishermen or sailors?
25. Why are the rivers of Norway and Sweden short?
26. Why is agriculture more extensive in Sweden than in Norway?
27. Why has Hammerfest continuous light for some 70 days in summer?
28. Why is this port so free from ice?
29. Why so many lakes in Sweden and northwestern Europe generally?
30. Why does Russia covet Scandinavia and Turkey?
31. Why are the North and Baltic Seas so shallow?
32. Why is the former so much milder in temperature?
33. Why are the rivers of Russia mostly long and sluggish?
34. Why is eastern Russia dry?
35. Why is so little really known of the Balkan peoples?

R. H. W.

GEOGRAPHICAL ARTICLES IN RECENT MAGAZINES

N. H. Darton of the U. S. Geological Survey has an exceptionally interesting paper on "The Southwest" in the August *National Geographic Magazine*. Besides discussing the climate and surface features, the natural wonders of the region, the Indian tribes, forests, irrigation projects and future possibilities, he treats of fruit growing in Southern California, the canteloupes of the Imperial Valley, the alfalfa of the Salt River Valley, ostrich raising, and the vast mineral wealth of these states.

In the same magazine, Sir Wilfrid Grefell describes Labrador as the "Land of Eternal Warning;" and the editor, Gilbert H. Grosvenor, gives a collection of "Notes on the Deserts of the United States and Mexico." All of these articles are profusely illustrated.

The July and August numbers of *The Bulletin of American Republics* are the annual review numbers. Together they constitute a little encyclopedia of up-to-date information about all of the American republics. There is, for each country, a Geographical sketch, an Historical sketch, sections on Constitution and Government, Finance, Commerce,

Industries, Railways, Interior Waterways, Means of Approach, and General Information. The chapter on the Commerce, Industries, and Manufactures of the United States is a very useful summary. The Bureau has published *for free distribution* a separate pamphlet on each of the republics. They contain the same matter as is given in the magazine. Teachers whose classes will study the geography of our sister republics will do well to secure either the July and August magazines, 25 cents each, or the free separate pamphlets which treat of the leading countries, say Mexico, Cuba, Brazil, Argentina and Chile. Address; Bulletin of American Republics, Washington, D. C.

The September number of the *Bulletin* includes a General Survey of Latin American Commerce in 1909. This shows that, of the total foreign trade of the ten South American Republics, we had only 14 per cent. against Germany's 17 per cent. and Great Britain's 31 per cent.

In the August *Bulletin of the American Geographical Society*, Miss Ellen C. Semple writes on "The Anglo-Saxons of the Kentucky Mountains." The article is an excellent study of geographical environment, especially mountain environment, in its influence upon the people. In the same magazine Prof. George D. Hubbard has a paper on the Influence of Precious Metals on American Exploration, Discovery, Conquest, and Possession.

With some misgivings as to the propriety of mentioning the fact here, it may be stated that R. H. Whitbeck has a paper on "Where Shall We Lay the Emphasis in Teaching Geography?" in the October number of *Education*. The paper deals with geography in the grade schools.

EDITORIAL

There have been unmistakable evidences during the past two or three years of a pronounced trend of opinion concerning the high school course in Geography. Some of those evidences are:

The symposium published in the Journal of Geography in March and April, 1908.

The Report of the N. E. A. Committee on Secondary School Geography, at Denver in 1909.

The discussions of the Round Table of the Association of American Geographers at Baltimore in December, 1908, and the report of the committee of this association at Boston in December, 1909.

The general tenor of the comment which one hears among school men and the character of new courses of study, e. g. the New York state course referred to elsewhere in this issue.

The generally favorable reception accorded to Gregory, Keller and Bishop's new *Physical and Commercial Geography*.

The trend is strongly in the direction of introducing into high school

geography a fuller consideration of the ways in which every form of life, but particularly MAN, is influenced by natural environment. This conception of geography makes it, to quite an extent, a study of relationships between man and his physical surroundings. It places the emphasis on the *influence* of climatic conditions and physiographic features, rather than on a detailed description of them. This is not a new conception. It grows out of the principle of Evolution. German geographers, especially Ritter and Ratzel, have developed it in years past. Professor Davis' Physical Geography, published twelve years ago, emphasizes the human response idea. Nearly one-sixth of the text of that book bears on life relations. Most of the high school books give some attention to this phase of the subject, though it is not made conspicuous. In actual practice, however, the schools have taught physical geography as if it were a classification of land forms and a description of physical processes and agencies, without much relation to the influence which these land forms or these agencies exert in human affairs. There is a recognized need of a change in this particular and the change is coming—slowly, as it ought to.

The JOURNAL is firm in its belief that the high school geography of the coming generation will do much for the pupil in fitting him for intelligent participation in the active affairs of life, and in giving him an appreciation of the close relationship between human activities, in the large and the geographic environment in which they are carried on.

The movement whose aim is to give high school students such a conception of geography ought to be welcomed. However, there may be, in the future, a danger of going to extremes, as did the movement in elementary geography ten or twelve years ago, when the new books introduced such an excess of physiography into grade work. In our efforts to cut down the amount of time given to the physical side of the subject, we must not forget that this cutting-down process can be overdone. Pure physical geography is not outlawed. The classification of land forms, the study of physical agencies and processes, is an essential part of the course. The need is for pruning away the less useful and practical portions—and there are such—and devoting the time thus saved to a study of geographical influences and relations To make this latter point concrete, we give, following, a brief summary of some of the ways in which MOUNTAINS exert an influence upon man and his doings. We believe that such a study of the influence of mountains may profitably replace *some* of the customary description of block, folded, faulted, domed, young, mature, and old mountains. Not that these terms should be dropped, but that the amount of time given to such classifications and descriptions should be reduced.

MOUNTAINS

In their Influence upon Man and His Activities

The influence which mountains exert upon man and his activities is one of the most positive and easily discernible of geographic influences.

Mountains whose general elevation is low or whose passes are low exert only a moderate influence.

In estimating the influence of mountains upon a country, consider what the conditions would be if the mountain area were a plain.

1. The climate of a mountain belt is made colder by its elevation. One mile upward equals 800 miles poleward, The tropical Andean countries can produce practically all crops.
2. High mountains force the passing winds to precipitate their moisture on the windward slope, producing arid or desert lands on the leeward side. Our western mountains render 600,000,000 acres unfit for agriculture.
3. The gradual melting of mountain glaciers equalizes the seasonal flow of rivers, thus reducing floods, and aiding navigation and irrigation.
4. Excessive weathering and erosion in mountains often overloads a stream to the detriment of navigation, as in the Missouri, or to the benefit of alluvial plains as in the Nile.
5. Mountains supply most of the sediments of which the plains are built up.
6. Fissures and fractures in the earth's crust and the circulation of mineral-carrying waters arise from mountain building. Hence mountains are the natural home of metallic veins and of mining.
7. The relative inaccesibility of mountains tends toward the preservation of their forests, thus conserving the timber supply, and regulating the run-off.
8. Mountains discourage agriculture, but their lower slopes favor grazing, e. g. in the Rockies and the Alps.
9. The rigorous climate, scanty soil, difficulties of travel, and restricted industries of mountains attract but a scanty population. About the same number of people live in our ten mountain states of the West as live in New York City alone.
10. Mountains are often effective barriers to the intercourse of people, to the spread of population, to military campaigns, and to the building of roads and railways. They are nature's boundary lines for nations. Contrast the many nations in the mountainous parts of Europe with the single nation occupying the Russo-Siberian plain.
11. Mountains form a retreat for vanquished races; they isolate and preserve past languages, customs, laws and ideas.

    The origin of the Basques of the Pyrenees is lost in antiquity.

Russia subjugated 5,000,000 square miles of plains more quickly than she subjugated the Caucasus.

There are 500,000 people in the mountains of Wales who can not speak English, though Wales was joined to England five centuries ago.

The mountaineers of the South are using upwards of 300 words which have been obsolete in England since the 16th century, or survive only in dialects.

Tibet has remained about the most secluded area outside of the polar regions, and the Balkans the most untamed part of Europe.

Jewish tribes in the Caucasus still name their children with names in vogue in Israel in the time of the Judges and which have elsewhere been obsolete for 2500 years.

12. The isolation of mountain life accentuates non-social qualities, as seen in the clannishness of the Scotch mountaineer, the democracy of the Swiss, the insubordination of the Basques and the tribes of the Caucasus, the Tibetan's dislike of strangers, the lawlessness in the Balkans, and the suspiciousness and family feuds among our southern mountaineers. R. H. W.

INFLUENCE OF MOUNTAINS UPON PEOPLE.—The study of history shows how greatly our ancestors were influenced by the presence of mountain ranges. Once mankind was shut in by such barriers almost as completely as were the lower animals. Mountains have made communication between different tribes and nations so difficult that each has gone on living its own life, often almost entirely ignorant of its neighbor on the other side of the barrier.

The Indians of the Pacific slope are divided into almost as many tribes as there are valleys occupied by them, and each tribe speaks a different dialect or language.

The discovery and settlement of our country has been very greatly influenced by the existence of lofty and rugged mountain ranges. It frequently happens that there are low gaps or passes through these, making it possible to cross them by horse trail or even by wagon road and railroad.

From *Fairbanks' Practical Physiography*, chapter on "The Influence and Importance of Mountains."

A NEW TYPE OF TEXT BOOK IN COLLEGE GEOGRAPHY

There has recently been published a volume which is likely to prove to be the forerunner of a new type of text books. It is Gregory, Keller and Bishop's *Physical and Commercial Geography.* It is divided into:

I. The Natural Environment, 123 pages.
II. Relation of Man to Natural Environment, 123 pages
III. Geography of Trade, 220 pages.

The book is distinctly in accord with the present trend of school and college geography, and we heartily welcome it.

Part I is a discussion of the larger topics of Physical Geography, the Ocean, Topography of the lands—with special attention to the Physiography of the United States—Soil, Water, Air and Organic Environment. Some will consider that pure physical geography is entitled to more emphasis than it receives in this book, and that college students who did not receive instruction in physical geography in the secondary schools, have an insufficient basis for the appreciation of the discussions which follow in parts II and III.

That will, of course, depend much upon the way in which the book is used. Presumably the college instructor will provide for that through his lectures. In view of the fact that we have good text books in pure Physical Geography, and none which adequately presents the Human Response side, we believe that Gregory, Keller and Bishop did wisely in giving the major part of this book to the Relation of Man to his Natural Environment, and to Geographic Influence upon Trade and Industry. Such discussions are what are needed at the present stage in the evolution of school and college geography.

Generally speaking, Commercial Geography in American schools has proved only partially satisfactory. Authors of text books have seemingly felt that they must avoid sins of omission, and they have included too many details, too many mere, ever-changing facts. All teachers have felt this weakness in Commercial Geography. Professor Gregory and his colleagues have gone a long way toward correcting this error. They confine themselves to the commerce of the United States, The British Empire and the German Empire. One can not help wishing that the treatment had been extended briefly to some of the other commercial nations. But, then, where would you stop? On the whole, maybe it is better to emphasize the underlying principles which control the commerce of the leading three nations, than to curtail the treatment of general principles in order to add more mere facts about more countries.

We are glad that such a book has come on the market and we believe the geographers of the country are glad of it.

Published by Ginn & Co., New York and Boston. 469 pp., $3.60.

R. H. W.